UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,965	10/07/2003	William J. Crilly JR.	1959-9	6070

81178   7590   02/16/2011
Daniel P. Burke, Esq.
Daniel P. Burke & Associates, PLLC
240 Townsend Square
Oyster Bay, NY 11771

EXAMINER
POWERS, WILLIAM S

ART UNIT	PAPER NUMBER
2434	

MAIL DATE	DELIVERY MODE
02/16/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 December 2010_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _81-89_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _81-89_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set
forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this
application is eligible for continued examination under 37 CFR 1.114, and the fee set
forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action
has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on
12/22/2010 has been entered.

Response to Arguments

2.   The cancellation of claims 1-80 has rendered the rejection of those claims moot.
The rejection of the newly added claims 81-89 are addressed below.

Response to Amendment

3.   The Examiner has stated the below column and line numbers as examples. All
columns and line numbers in the reference and the figures are relevant material and
Applicant should take the entire reference into consideration upon the reply to this
Office Action.

4.   Claims 1-80 have been cancelled.

5.   Claims 81-89 are newly added.

6.   Claims 81-89 are pending.

Information Disclosure Statement

7.   No Information Disclosure Statements have been submitted by the Applicant.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

10.   Claims 81-85 and 87-89 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent No. 7,295,831 to Coleman et al. (hereinafter Coleman) in

view of US Patent No. 7,778,606 to Ammon et al. (hereinafter Ammon).

As to claim 81, Coleman teaches:

a.   At least one processor (CPU) (Coleman, 3:35-47).

b.   At least one antenna array for producing a plurality of communication

beams (smart antenna sub-system) (Coleman, 7:47-67).

c.   One or more media comprising processor-executable instructions that are

capable of being executed by said at least one processor, the processor-

executable instructions adapted to direct the apparatus to perform steps

(examples of computer readable media storing instructions) (Coleman, 3:60-4:3)

comprising:

       i.   Receiving a plurality of communication beams packets via at least

       one communication beam (smart antenna subsystem receives

       transmissions) (Coleman, 7:47-67).

       ii.   Monitoring at least one received-signal-characteristic,

       representative of propagated arrivals on the apparatus (Direction-of-Arrival

       for received signals is determined) (Coleman, 8:45-67).

Coleman does not expressly mention that the signals are from a single source address.

However, in an analogous art, Ammon teaches for a plurality of packets that relate to a

single source address (packets are checked for spoofed source address) (Ammon,

4:23-36).

Therefore, one of ordinary skill in the art at the time the invention was made

would have been motivated to implement the wireless intrusion detection system of

Coleman with the detection of address spoofing of Ammon in order to detect intruders in

wireless networks as suggested by Ammon (Ammon, 1:5-10).

Coleman as modified further teaches:

> iii.   Detecting a wireless interloper if a discrepancy is determined to
>
> exist with regard to propagation to the apparatus (abnormal wireless
>
> events indicate a possible intrusion) (Coleman, 11:36-44).

As to claim 82, Coleman as modified teaches wherein the detecting step is

perform without requiring additional receiving, monitoring, detecting, or location-

triangulation assistance from other apparatus nodes in a network (wireless signals are

collected by the smart antenna subsystem) (Coleman, 7:47-67).

As to claim 83, Coleman as modified teaches wherein the monitoring step for a

plurality of packets related to a single source address comprises logging and updating

at least one received-signal-characteristic selected from the group comprising: arrival

delay, arrival direction, offset in arrival directions for multipath, carrier frequency offset,

and direction-indexed path signal strength (smart antenna subsystem determines the

direction of arrival of incoming signals and are indexed and updated according to a

mistrust level threshold) (Coleman, 7:47-67, 8:45-9:50 11:57-12:45).

As to claim 84, Coleman as modified teaches using a histogram to represent the

quantized distribution of at least one received signal characteristic (Both the Coleman

and Ammon references collect and organize data obtained from the received signals

(mistrust level data) (Coleman, 12:27-53) (abnormal_table) (Ammon, 13:52-67). While

neither reference specifically calls for a histogram to represent the collected data, one of

ordinary skill in the art realizes there are myriad different ways to represent collected

data whether it is a simple table, pie chart or in the case of the instant application, a

histogram. This limitation is seen as a design choice and given no patentable weight.).

As to claim 85, Coleman as modified teaches wherein the height of a histogram

bin indicates the number of occurrences that a quantized received-signal-characteristic

falls into that bin (Both the Coleman and Ammon references collect and organize data

obtained from the received signals (mistrust level data) (Coleman, 12:27-53)

(abnormal_table) (Ammon, 13:52-67). While neither reference specifically calls for a

histogram to represent the collected data, one of ordinary skill in the art realizes there

are myriad different ways to represent collected data whether it is a simple table, pie

chart or in the case of the instant application, a histogram. This limitation is seen as a

design choice and given no patentable weight.).

As to claim 87, Coleman as modified teaches detecting whether the distribution

of one or more received-signal-characteristics monitored over a first plurality of packets

is commensurate with that monitored over a second plurality of packets and where said

second plurality of packets is not identical to said first plurality of packets (signals are

monitored for anomalies over a period of time in order to raise or lower the mistrust level) (Coleman, 12:38-54).

As to claim 88, Coleman as modified teaches determining whether a bi-modal distribution appears, responsive to an alarm threshold, when one or more received-signal-characteristics are monitored over a plurality of packets (if an indication of intrusion is detected during a monitoring cycle, a check is made to see if an alarm has been raised for an intrusion in a previous cycle) (Ammon, 14:45-63).

As to claim 89, Coleman as modified teaches wherein the processor-executable instructions are adapted to cause the apparatus to perform the further step of : if a wireless interloper is detected in the detecting action, countering the interloper (blocking intruder's signal) (Coleman, 7:58-8:7).

11.   Claim 86 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,295,831 to Coleman et al. (hereinafter Coleman) in view of US Patent No. 7,778,606 to Ammon et al. (hereinafter Ammon) as applied to claim 85 above, and further in view of US Patent No. 7,308,714 to Bardsley et al. (hereinafter Bardsley).

As to claim 86, Coleman as modified uses a timer to "age" the mistrust level, if no anomalous events occur within the time limit, the mistrust level is decremented, if an anomalous event does occur within the time limit, the mistrust level is incremented, but

does not expressly mention removing binned occurrences (Coleman, 15:1-20).

However, in an analogous art, Bardsley teaches wherein a binned occurrence is

removed when it ages beyond a preset limit (data aging policy) (Bardsley, 5:45-55).

Therefore, one of ordinary skill in the art at the time the invention was made

would have been motivated to implement the wireless intrusion detection system of

Coleman as modified with the data aging policy of Bardsley in order provide for an alert

system that is not overwhelmed during a wireless intrusion attack as suggested by

Bardsley (Bardsley, 1:30-50).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to WILLIAM S. POWERS whose telephone number is

(571)272-8573. The examiner can normally be reached on m-f 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kambiz Zand can be reached on 571 272 3811. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William S. Powers/   William S. Powers
Examiner, Art Unit 2434   Examiner
                                                    Art Unit 2434

2/11/2011